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Letters ❖ Correspondance

Influenza vaccine given during pregnancy

I read with interest the article[1] by Ran Goldman and Gideon Koren on "Influenza vaccination during pregnancy" because I was aware of the US statement on influenza vaccine during pregnancy but not the Canadian statement. The authors provide the web link to the US Centers for Disease Control (CDC) site, which lists routine use of influenza vaccine during pregnancy, but they do not provide the Health Canada link. They mistakenly called the US link "Health Canada."

Health Canada's August 2002 *Canada Communicable Disease Report* statement[2] on influenza gives a different stance on its use. This article quotes the case reports, observational studies, and cross-sectional studies of the Tennessee investigations that led to the CDC's statement for the United States. But the article goes on to state that studies in Canada and Europe have not been done and *at this time*, therefore, routine immunization during pregnancy is *not* recommended unless pregnant mothers fall into a high-risk category.

—David Falk, MD, CCFP, DTMH
Calgary, Alta
by e-mail

Reference

1. Goldman RD, Koren G. Influenza vaccination during pregnancy [Motherisk Update]. *Can Fam Physician* 2002;48: 1768-9.
2. Health Canada. Statement of influenza vaccination for the 2002-2003 season. *Can Commun Dis Rep* 2002; 28;1-20.

Response

We thank Dr Falk for his thoughtful comments. During manuscript preparation we erroneously labeled the US Centers for Disease Control Internet link "Health Canada."

While the current Health Canada *CCDR* recommendation is to immunize pregnant mothers with the influenza vaccine only if they fall into the high-risk group, no recommendation is given for other pregnant women, presumably due to lack of studies that originated from Canada or Europe. We believe that the experience gathered by researchers from the United States is sufficiently strong to recommend immunization to all pregnant women and that lack of Canadian experience should not deter family physicians from recommending immunization to Canadian women. Many other medical recommendations are not based on Canadian experience but are relevant for Canadians. When convincing evidence arises from research done in other places, it seems reasonable not to "reinvent the wheel." With the evolving process of harmonization among regulatory agencies worldwide, we are likely to see more reliance on data gathered from different countries.

—Ran D. Goldman, MD
—Gideon Koren, MD, FRCPC

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How much fish is too much?

The Motherisk article[1] in the October issue gives some excellent and much-needed advice for pregnant women and their physicians on the risks of eating fish. However, the statement that for pregnant women, women of childbearing age, and children younger than 15 "...eating canned tuna is allowed because mercury levels in canned tuna are much lower than guideline levels," while correctly reflecting Canadian and US guidelines, does not, according to current data, correctly address the question of quantity. The physicians of the Environmental Health Committee of the Ontario College of Family Physicians (OCFP) are concerned about this omission.

Canned tuna differs from fresh tuna only in that smaller fish are selected during processing, thereby allowing canned tuna to meet Health Canada mercury limits of <0.5 ppm.

Pregnant patients eating four cans of tuna per week could be ingesting the equivalent of two servings of fresh tuna per week or one serving of swordfish per week. This is based on data showing that mercury levels found by the US Food and Drug Administration[2] in 248 canned tuna samples ranged from "none detected" to 0.75 ppm, mean 0.17 ppm.

This compares with a range of "none detected" to 1.30 ppm, mean 0.32 ppm, for 191 samples of fresh and frozen tuna, and a range of 0.10 to 3.22 ppm, mean 1.00 ppm, for 598 samples of swordfish.

This evidence shows a limit to the amount of canned tuna that should be consumed by those in high-risk groups. Contrary to the article's advice, we believe there should be a guideline on the number of cans per month.

—Riina I. Bray, MSC, MD, CCFP
—Kathleen J. Kerr, MD
—Margaret D. Sanborn, MD, CCFP, FCFP
Environmental Health Committee, Ontario College of Family Physicians
by mail

References

1. Yagev Y, Koren G. Eating fish during pregnancy. Risk of exposure to toxic levels of methylmercury [Motherisk Update]. *Can Fam Physician* 2002;48:1619-21.
2. US Food and Drug Administration. Mercury levels in seafood species, tables 1 and 2, May 2001. Available from: http://vm.cfsan.fda.gov/~frf/sea-mehg.html. Accessed 2002 Nov 13.

Response

We thank Drs Bray, Kerr, Sanborn, and their committee for their interest in our Motherisk Update and for their thoughtful points. The Food and Drug Administration (FDA) has divided fish into two categories in a table[1]: those with "highest mercury levels" versus "much lower mercury levels." In the March 2001 *Consumer Advisory*,[2] the FDA limited pregnant women's diet to one serving monthly of the "highest mercury level" fish, and up to 12 ounces a week of fish with lower levels. They specifically say that "you can choose shellfish, canned fish, smaller ocean fish, or farm raised fish."[2]

It should also be stated that these safety guidelines are far below any exposure that has biological consequences for a child. Hence, a woman who ate more than the recommended amounts before knowing she conceived should not be led to believe she poisoned her unborn baby.

Such misperception might lead to unjustified terminations of otherwise wanted pregnancies. In the case presented in the Motherisk Update, the woman was very concerned about her exposure before she realized she was pregnant. In this case, it would be appropriate to advise her she is not at increased risk. Women should also be advised to limit consumption of canned tuna to 12 ounces a week.

—Gideon Koren, MD, FRCPC

References

1. US Food and Drug Administration, Center for Food Safety and Applied Nutrition, Office of Seafood; Mercury levels in Seafood Species. Bethesda, Md: US Food and Drug Administration; 2001 Available from: www.um.cfsan.fda.gov. Accessed 2003 January 14.
2. US Food and Drug Administration, Center for Food Safety and Applied Nutrition. Consumer Advisory, March 2001. Bethesda, Md: US Food and Drug Administration; 2001 Available from: www.um.cfsan.feda.gov. Accessed 2003 January 14.

Another drug database for hand-held computers

We have read with great interest Dr Cameron's article[1] on drug databases for hand-held computers. Dr Cameron reviewed three programs: ePocrates, DrDrugs, and LexiDrugs. Recently, another important program, in our view, from Tarascon Publishing has become available for downloading as a beta-version application from **http://www.usbmis-test.com/beta/beta_test.php**. Taking into account that the books *Tarascon Pocket Pharmacopoeia, Deluxe Lab-coat edition,* and *Tarascon Pocket Pharmacopoeia, Classic Shirt-pocket edition*, are very popular among Canadian physicians, we believe that it is important to review the electronic version of Tarascon Pocket Pharmacopoeia Deluxe.

This program is about the size of LexiDrugs—it requires more than 3 MB of memory. It seems to cover approximately the same number of drugs as *Tarascon Pocket Pharmacopoeia 2003, Deluxe Lab-coat edition*. As all other reviewed drug databases do, it lists agents by US trade and generic names, but it also includes the Canadian trade names. For each drug there is information on indications, adult and pediatric doses, contraindications, adverse effects, mechanism of action, and administration during pregnancy and lactation. The program is intuitive and easy to navigate. It also includes herbal and alternative remedies and their interactions with other medications. It has some nice add-ons, such as drug dose and infusion rate calculators, cardiac protocols, drug therapy reference websites, therapeutic levels of some medications, and antidotes. The drug interaction checker searches by specific drug names (LexiDrugs offers this function as an add-on for $40). The application runs on both Palm OS and Pocket PC platforms as opposed

to ePocrates and LexiDrugs, which run on Palm OS only.

We have used tests proposed by Dr Cameron, ie, we have checked the information on ephedrine, cisapride, cetirizine (Reactine), and atorvastatin. The program cites the potential interaction of atorvastatin with grapefruit juice; Reactine is listed under the name of cetirizine, which also includes the Canadian trade name Reactine. It warns about cisapride's restricted access and side effects but does not advise about the interaction between ephedrine and ephedra; however, it informs users that the latter contains ephedrine and pseudoephedrine.

Currently, the beta-version application does not support memory expansion cards, ie, can work only off the hand-held computer's main memory, but according to the information posted on **http**://**www.tarasconpublishing.com/store/palm.asp**, this will be fixed by the time the commercial application is shipped. The program does not have an auto-update and does not track your activity as ePocrates does. Database content was updated monthly throughout 2002, then continuously in 2003. The updates will be available on the Tarascon website. Tarascon is committed to keeping this product free through December 31, 2002, and anticipates a $25 (US) yearly subscription thereafter, which is less expensive than LexiDrugs ($75 [US]) or DrDrugs ($50 [US]).

—Anatoly Dobrousin, MD
Edmonton, Alta
—Igor Shamis, MD
Halifax, NS
by e-mail

Reference

1. Cameron S. Drug databases for users of hand-held computers [Resources]. *Can Fam Physician* 2002;48:752-3.

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